

# MT830R

## Omnidirectional Condenser Lavalier Microphone

 audio-technica

broadcast & production microphones



### Features

- **Clip-on lavalier mic provides high intelligibility for lecturers, stage/TV performers and singers**
- **Designed to be worn as a lavalier or hidden in loose clothing or in the hair**
- **Wide-range capability ensures clean, accurate reproduction**
- **Small size provides excellent yet unobtrusive sound pickup**
- **Rugged design and construction for reliable performance**
- **UniSteep® filter provides a steep low-frequency attenuation to improve sound pickup without affecting voice quality**
- **Wireless models offered in black and beige (-TH)**
- **Also available in wireless models (without power module) terminated for use with all Audio-Technica UniPak® wireless systems and many other manufacturers' wireless systems**

### MT830R Description

The MT830R is a miniature clip-on/lavalier condenser microphone with an omnidirectional polar pattern. It is designed for quality sound reinforcement, professional recording, television and other demanding sound pickup applications.

The microphone is intended to be worn on the clothing or hidden in props for excellent yet unobtrusive sound pickup. The wide-range capability of the microphone ensures clean, accurate reproduction with high intelligibility for speakers and presenters as well as for instrument pickup. Its small size makes it ideal for use in applications where minimum visibility is required.

The microphone requires 11V to 52V phantom power for operation.

The microphone includes a 7.6 m (25') permanently attached miniature cable. Its free end connects to the provided AT8538 power module via a TA3F-type connector. The output of the power module is a 3-pin XLRM-type connector.

A recessed switch in the power module permits choice of flat response or low-frequency roll-off (via integral 80 Hz high-pass UniSteep® filter) to help control undesired ambient noise.

The microphone comes equipped with a power module, a clothing clip and windscreens. All MT830R models are available with a low-reflectance black finish; selected models are also available in beige.

### Wireless Models Description

The microphone is also available in a variety of wireless models, including the MT830cW. The MT830cW features a 1.4 m (55") permanently attached miniature cable terminated with a locking 4-pin connector for use with

Audio-Technica UniPak® body-pack transmitters. Models are also available in a variety of terminations for use with many other manufacturers' wireless systems. No power module is included (or required) with the wireless models. The wireless models' dimensions, polar pattern and included accessories are otherwise identical to those of the MT830R.

The MT830cW is also available unterminated as the MT830c.

### Cable Terminations

MT830cW, MT830cW-TH	Terminated with locking 4-pin connector for use with Audio-Technica® UniPak body-pack transmitters
MT830cT5, MT830cT5-TH	Terminated for Lectrosonics® wireless systems using TA5F-type connector
MT830c	Unterminated

Model numbers ending in "TH" are beige.

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### Operation and Maintenance

The MT830R requires 11V to 52V phantom power for operation.

Output is low impedance (Lo-Z) balanced. The signal appears across Pins 2 and 3; Pin 1 is ground (shield). Output phase is "Pin 2 hot"—positive acoustic pressure produces positive voltage at Pin 2.

To avoid phase cancellation and poor sound, all mic cables must be wired consistently: Pin 1-to-Pin 1, etc.

An integral 80 Hz high-pass UniSteep® filter provides easy switching from a flat frequency response to a low-end roll-off. The roll-off position reduces the microphone's sensitivity to popping in close vocal use. It also reduces the pickup of low-frequency ambient noise (such as traffic, air-handling systems, etc.), room reverberation and mechanically coupled vibrations. To engage the UniSteep® filter, use the end tip of a paperclip or other small pointed instrument to slide the switch toward the "bent" line.

For use as a lavalier, attach the microphone about six inches below the chin. Anticipate movements that may cause the microphone to rub against or be covered by clothing, and position the microphone to avoid it.

Avoid leaving the microphone in the open sun or in areas where temperatures exceed 110° F (43° C) for extended periods. Extremely high humidity should also be avoided.

### Architect's and Engineer's Specifications

The microphone shall be a fixed charge condenser. It shall have an omnidirectional polar pattern and a frequency response of 30 Hz to 20,000 Hz. The microphone shall operate from an external 11V to 52V DC phantom power source. It shall be capable of handling sound input levels up to 135 dB with a dynamic range of 108 dB. Nominal open-circuit output voltage shall be 14.1 mV at 1V, 1 Pascal. Output shall be low impedance balanced (200 ohms).

The microphone shall have a 7.6 m (25') permanently attached miniature cable terminating in a TA3F-type output connector. The output connector shall connect to a TB3M-type jack on the included power module. The power module shall contain a recessed switch to permit choice of flat response or 80 Hz low-frequency roll-off. The output of the power module shall be a 3-pin XLRM-type connector.

The microphone shall be 15.8 mm (0.62") long. It shall have a width

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of 8.3 mm (0.33") and a thickness of 5.0 mm (0.19"). Weight shall be 1.3 grams (0.05 oz). The microphone shall include a power module, a clothing clip and windscreens. Finish shall be low-reflectance black (selected models available in beige).

The microphone shall also be available with a 1.4 m (55") permanently attached miniature cable terminated for use with Audio-Technica UniPak® body-pack transmitters and a variety of other manufacturers' wireless systems. The wireless models' dimensions, polar pattern and included accessories (excluding power module) shall be identical to those of the wired model. The microphone shall also be available unterminated.

The Audio-Technica MT830R is specified.

The Audio-Technica [MT830cW]; [MT830cW-TH]; [MT830cT5]; [MT830cT5-TH] (wireless version) is specified.

The Audio-Technica MT830c (unterminated) is specified.

## Specifications

<b>Element</b>	Fixed-charge back plate, permanently polarized condenser
<b>Polar pattern</b>	Omnidirectional
<b>Frequency response</b>	30-20,000 Hz
<b>Low frequency roll-off</b>	80 Hz, 18 dB/octave
<b>Open circuit sensitivity</b>	-37 dB (14.1 mV) re 1V at 1 Pa
<b>Impedance</b>	200 ohms
<b>Maximum input sound level</b>	135 dB SPL, 1 kHz at 1% T.H.D.
<b>Dynamic range (typical)</b>	108 dB, 1 kHz at Max SPL
<b>Signal-to-noise ratio<sup>1</sup></b>	67 dB, 1 kHz at 1 Pa
<b>Phantom power requirements</b>	11-52V DC, 2 mA typical
<b>Switch</b>	Flat, roll-off
<b>Weight</b>	Microphone: 1.3 g (0.05 oz) Power module: 81 g (2.9 oz)
<b>Dimensions</b>	Microphone: 15.8 mm (0.62") long, 8.3 mm (0.33") wide, 5.0 mm (0.19") thick Power module: 92.9 mm (3.66") long, 18.9 mm (0.74") diameter
<b>Output connector</b>	Power module: Integral 3-pin XLRM-type
<b>Cable</b>	7.6 m (25') long (permanently attached to microphone), 2.5 mm (0.10") diameter, 2-conductor, shielded cable with TA3F-type output connector
<b>Audio-Technica case style</b>	M7
<b>Accessories furnished</b>	AT8538 power module; clothing clip; windscreens

In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

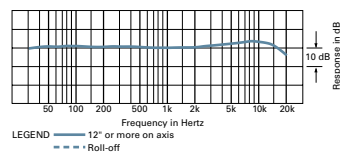
<sup>1</sup> Pascal = 10 dynes/cm<sup>2</sup> = 10 microbars = 94 dB SPL

<sup>1</sup> Typical, A-weighted, using Audio Precision System One.

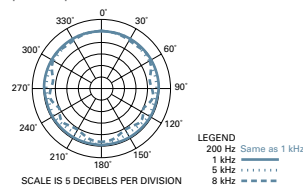
Specifications are subject to change without notice.



frequency response: 30–20,000 Hz



polar pattern



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